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CESARI AND MCKENNA, LLP
88 BLACK FALCON AVENUE
BOSTON, MA 02210

EXAMINER

QUAN, ELIZABETH S

ART UNIT

PAPER NUMBER

1743

DATE MAILED: 08/28/2002

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/740,624

Applicant(s)

WARHURST ET AL.

Examiner

Elizabeth Quan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6 and 11-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6 and 11-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other:

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 34b. Suggested placement includes page 5, line 20: Again, two feet 36a, 36b are provided at the bottom edge of each side of cover 34a[.], 34b. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

1. The disclosure is objected to because of the following informalities: On page 3, line 24 “additions” should be “addition.”

Appropriate correction is required.

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: ledge(s), ridge, and lateral and planar portions.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-3, 6, and 11-17 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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5. Referring to claim 1, the recitation of “aperture” is confused with the “aperture” in the specification. The aperture in the current claim refers to the slot receiving the tab, while the aperture in the specification is for making the sides of the microplate visible. Suggested modification includes:

A cover assembly for a microplate, said assembly comprising:

a layer of material shaped and dimensioned to removably seal a plurality of [a microplate's] well openings of said microplate;

a pressure plate disposed on said layer of material for dispersing a compressive force in a generally uniform manner across said layer of material;

a cover having a top and first and second sides, said top shaped so as to generate said compressive force when said cover is engaged with said microplate, said first and second sides each including a [ledge] flange for supporting a bottom edge of said microplate;

a plurality of [vertical] tabs extending downward from said [ledges] flanges;

a plurality of [apertures] slots in said cover that register with said tabs, whereby a plurality of [the] covers can be stacked with the [vertical] tabs on a cover extending down into the [apertures] slots of a cover that is disposed beneath.

6. Referring to claim 2, “one or more longitudinally-extending tabs” is already provided with antecedent basis in claim 1. Suggested modification includes:

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The cover assembly as in claim 1 wherein said top of said cover and said pressure plate each include [one or more longitudinally-extending] said plurality of tabs, which enable said cover to be engaged with or disengaged from said microplate by a robotic system.

7. Referring to claim 3, there is indefinite language with the recitation of “said cover’s first and second sides.” Suggested modification includes:

The cover assembly as in claim 1 wherein said [cover’s] first and second sides of said cover includes apertures which render at least portions of the first and second sides of said microplate visible when said cover is engaged with said microplate.

8. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: plurality of tabs. The terms “robotic access features” are indefinite, as “a generally rectangular piece of metal” alone would be accessible by a robot.

Suggested modification includes:

The cover assembly of claim 1 wherein said pressure plate comprises a generally rectangular piece of metal with [robotic access features] said plurality of tabs accessible by a robotic system.

9. Referring to claim 11, the specification does not provide support for the ridge and lateral and planar portions, which render the claim indefinite. A ridge as defined by the Merriam-Webster’s Collegiate Dictionary, 10th Edition, is an elevated body part. It appears from the specification and drawings that the ridge is actually a depression. Suggested modification includes:

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The cover assembly of claim 1 wherein said [cover top] top of said cover includes a central, [longitudinally extending planar ridge portion] generally flat portion extending laterally along said cover and [lateral and planar portions extending upwardly from said ridge at their inner edges] an angled surface, said first and second sides extending downwardly from the outer edges of [said planar portions] said angled surface, whereby [the] said [planar portions and said ridge portions] flat portion and angled surface provide a resilient force that bears downward on said pressure plate and upward on the bottom edges of said microplate.

10. Referring to claim 12, “one or more longitudinally-extending tabs” is already provided with antecedent basis in claim 1. The addition renders the indefinite by suggesting the existence of another set of tabs. Suggested modification includes:

The cover assembly of claim 1 [including longitudinal tabs, extending tabs] wherein said tabs extend from said first and second sides, whereby said cover may be disengaged from or engaged with said microplate by displacing said tabs laterally outwardly or inwardly to move said [ledges] flanges away from or beneath said bottom edges of said microplate.

11. Referring to claim 13, the specification does not provide support for ledges and ridges, which render the claim indefinite. A ridge as defined by the Merriam-Webster's Collegiate Dictionary, 10th Edition, is an elevated body part. It appears from the specification and drawings that the ridge is actually a depression. Suggested modification includes:

A cover assembly for a microplate, said assembly comprising:

a layer of material shaped and dimensioned to removably seal a plurality of [a microplate's] well openings of said microplate;

a pressure plate disposed on said layer of material for dispersing a compressive force in a generally uniform manner across said layer of material; a cover having a top and first and second sides, said top of said cover including a central, [longitudinally extending planar ridge portion] generally flat portion extending laterally along said cover and [lateral and planar portions extending upwardly from said ridge at their inner edges] an angled surface, said first and second sides extending downwardly from the outer edges of [said planar portions] said angled surface, whereby [the] said [planar portions and said ridge portions] flat portion and angled surface provide a resilient force that bears downward on said pressure plate and upward on the bottom edges of said microplate.

12. Referring to claim 14, the specification does not provide support for ledges, which renders the claim indefinite. Suggested modification includes:

The cover assembly of claim 13 including [longitudinal tabs, extending] tabs extending from said first and second sides, whereby said cover may be disengaged from or engaged with said microplate by displacing said tabs laterally outwardly or inwardly to move said [ledges] flanges away from or beneath said bottom edges of said microplate.

13. Referring to claim 15, the specification does not provide support for ledges, which renders the claim indefinite. Suggested modification includes:

A cover assembly for a microplate, said assembly comprising:

a layer of compressible material shaped and dimensioned to removable seal a plurality of [a microplate's] well openings of said microplate;

a pressure plate disposed on said layer of compressible material for dispersing a compressive force in a generally uniform manner across said layer of compressible material; and

a cover having a top and first and second sides, said first and second sides extending downwardly from the outer edges of said top of said cover and including [ledges] flanges that extend beneath the bottom edges of said microplate, said top of said cover bowing upwardly from a central portion thereof to said first and second sides, whereby said top of said cover provides a [resilient] resilient force that bears downwardly on said pressure plate and upwardly on the bottom edges of said microplate.

14. Referring to claim 16, the specification does not provide support for ledges, which renders the claim indefinite. Suggested modification includes:

The cover assembly of claim 13 including [longitudinal tabs, extending] tabs extending from said first and second sides, whereby said cover may be disengaged from or engaged with said microplate by displacing said tabs laterally outwardly or inwardly to move said [ledges] flanges away from or beneath said bottom edges of said microplate.

15. Referring to claim 17, the specification does not provide support for ledges, which renders the claim indefinite. Furthermore, the recitation of “aperture” is confused with the “aperture” in the specification. The aperture in the current claim refers to the slot receiving the tab, while the aperture in the specification is for making the sides of the microplate visible. Additionally, it is also unclear from the specification and drawings whether both the cover and corresponding microplate are involved in interconnecting and stacking with the cover and

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corresponding microplate below since the claim recites that “tabs on a cover extending into the apertures of a cover assembly that is disposed beneath.” Suggested modification includes:

The cover assembly of claim 15 including:

a [pluarality] plurality of [vertical] tabs extending downward [form] from said [ledges] flanges; and

a plurality of [apertures] slots in said cover that register with said tabs, whereby a plurality of the cover assemblies can be stacked with the [vertical] tabs on a cover extending into the [apertures] slots of a cover assembly that is disposed beneath.

Claim Rejections - 35 USC § 103

16. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

17. Claims 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,056,427 to Sakabe in view of U.S. Patent No. 5,604,103 to Warner et al.

Referring to claims 13 and 15, Sakabe et al. disclose a thermal reaction apparatus comprising an elastic sheet (11) filled with silicone oil (10) sealed within a double layer structure, upper thermo-conductive plate (27), and upper heater (28) sequentially superimposed upon tray (20) within upper base (29) (see FIG. 2; COL. 2, lines 31-34 and 43-48). By applying appropriate pressure to upper base (29) the silicone oil (10) is displaced with the elastic sheet (11) to compensate for different levels of the openings of the cavities (21) to exert uniform pressure distribution to the upper face of the tray (20) to provide an effective seal against evaporation (see FIG. 2; COL. 2, lines 43-63). Sakabe

et al. do not disclose a ridge extending the length and central axis of the upper base.

Warner et al. disclose a cover (34) containing a pad (40) of flexible polymer sheet (54), defining a planar expanse (56) with an array (42) of resiliently compressible ridges (44, 46) extending in a width-wise and length-wise direction (see FIGS. 2B and 3; COL. 4, lines 11-22). With the application of a downward force onto the cover (34), the deformable ridges (44, 46) compresses in regions where ridges contact the edge of the opening of a well (28) (see FIGS. 5A-5D; COL. 5, lines 49-67; COL. 6, lines 1-9).

Warner et al. do not disclose ridges on the top side of the cover (34); however, it would appear the placement of ridges depends on the desired degree of pressure application and effective seal. Furthermore, ridge placement on the top side of the cover would create a direct shock absorber rather than ridges on the bottom. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the thermal reaction apparatus of Sakabe et al. to include ridges at the top of the cover to bear the application of downward pressure.

18. Claims 14 and 16 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,056,427 to Sakabe and U.S. Patent No. 5,604,103 to Warner et al. as applied to claims 13 and 15 above, and further in view of U.S. Patent No. 6,159,368 to Moring et al.

Referring to claims 14 and 16, Sakabe et al. in view of Warner et al. do not disclose tabs as part of the thermal reaction apparatus. Moring et al. disclose a multi-well microfiltration apparatus with a cover (150) secured to multi-well tray (24) by a releasable attachment means (see FIGS. 11-14; COL. 28, lines 43-44). The attachment means include resiliently deflectable arms (184), which are downwardly-extending tabs,

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depending from opposing lateral sides of the upper shell portion (154) (see FIGS. 11-14; COL. 28, lines 43-47). The structure of cover (150) facilitates automated handling by robotic arm (200) (see COL. 29, lines 11-30). Moring et al. do not disclose a pressure plate with tabs; however, it is well known to use tabs as necessary as protrusions to facilitate automation whether indirectly by not obstructing robotic handling or directly as grasp tabs. Furthermore, in order to accommodate stacking of cover assemblies, the tab must be downwardly-extending to avoid thrusting beyond the upper surface of the cover. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include downwardly-extending and laterally depending tabs of Moring et al. to the upper base and upper plate of Sakabe et al. in view of Warner et al. to facilitate automated movement and accommodate stacking.

Allowable Subject Matter

19. The following is a statement of reasons for the indication of allowable subject matter:

The tabs on a cover extending into the apertures of a cover assembly disposed beneath it is neither anticipated by, nor obvious over prior art. While U.S. Patent No. 4,619,363 to Wolfseder disclose tabs and apertures in the cover aligned with the tabs for interconnecting and stacking containers, there is no motivation for extending the tab through the aperture in the immediate cover assembly and into the aperture of the cover or cover assembly below.

20. Claims 1-3, 6, 11, and 12 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

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21. Claims 17 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art includes one or more limitations in the claims.

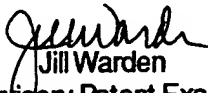
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Quan whose telephone number is (703) 305-1947. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (703) 308-4037. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 879-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Elizabeth Quan
Examiner
Art Unit 1743

eq
August 23, 2002


Jill Warden
Supervisory Patent Examiner
Technology Center 1700